

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (currently amended) [[A]] An isolated biopolymer marker peptide ~~selected from the group~~ consisting of ~~SEQ ID NO:1~~ and SEQ ID NO:2 diagnostic for insulin resistance.

Claims 2-38. (cancelled).

Claim 39. (currently amended) A method for diagnosing insulin resistance comprising:

- (a) obtaining a sample from a patient;
- (b) conducting mass spectrometric analysis on said sample in a manner effective to maximize elucidation of discernible peptide fragments contained therein; and
- (c) comparing mass spectrum profiles of [[a]] an isolated biopolymer marker peptide ~~selected from the group~~ consisting of ~~SEQ ID NO:1~~ and SEQ ID NO:2 to mass spectrum profiles of peptides elucidated from said sample; wherein recognition of a mass spectrum profile in the sample displaying the characteristic profile of the

mass spectrum profile for the isolated biopolymer marker peptide ~~selected from the group~~ consisting of ~~SEQ ID NO:1~~ and SEQ ID NO:2 is diagnostic for insulin resistance.

Claim 40. (currently amended) The method of claim 39, wherein ~~[[the]]~~ said sample is an unfractionated body fluid or a tissue sample.

Claim 41. (previously presented) The method of claim 39, wherein said sample is selected from the group consisting of blood, blood products, urine, saliva, cerebrospinal fluid, and lymph.

Claim 42. (previously presented) The method of claim 39, wherein said mass spectrometric analysis is selected from the group consisting of Surface Enhanced Laser Desorption Ionization (SELDI) mass spectrometry (MS), Maldi Qq TOF, MS/MS, TOF-TOF, ESI-Q-TOF and ION-TRAP.

Claim 43. (previously presented) The method of claim 39, wherein said patient is a human.

Claim 44. (currently amended) An insulin resistance diagnostic kit comprising: (a) ~~[[a]]~~ an isolated biopolymer marker peptide selected from the group consisting of ~~SEQ ID NO:1 and~~ SEQ ID NO:2 and (b) an antibody that binds to said isolated biopolymer marker peptide in a sample from a patient.

Claim 45. (currently amended) The insulin resistance diagnostic ~~assay~~ kit of claim 44, wherein said antibody is immobilized on a solid support.

Claim 46. (currently amended) The insulin resistance diagnostic kit of claim 44, wherein said antibody is labeled.